

Application No. 10/049,690

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Response to 08/27/03 Office Action

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

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Claim 1 (Previously Presented): Axial piston drive with a continuously adjustable piston stroke, comprising a drive shaft (10, 12) on which a swash plate (16) is supported in a crank chamber (14) in such a way as to be tiltable and displaceable in the axial direction, and with a controller (18, 20) by means of which an tilt angle and an axial position of the swash plate (16) can be adjusted, and with at least one piston (26, 28) connected to the swash plate (16) so that it can be actuated to move within a cylinder (22, 24), wherein the controller (18, 20) incorporates an adjustment unit (30, 32) that is separated from the piston (26, 28) and hydraulically driven,

characterized in that the adjustment unit (30, 32) is supplied with compressed oil by a hydraulic unit that is independent of the medium being propelled by the piston (26, 28).

Claim 2 (Canceled)

Claim 3 (Canceled)

Claim 4 (Currently amended): Axial piston drive according to Claim ~~2~~ 1, characterized in that the hydraulic adjustment unit (30, 32) is supplied with compressed oil by an oil separator (34) disposed downstream of the cylinder (22, 24).

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Claim ~~3~~² (Currently amended): Axial piston drive according to Claim ~~4~~¹, characterized in that the hydraulic adjustment unit (30, 32) is connected to the crank chamber (14) by way of a drain (36), and a influx (38) from the oil separator (34) to the

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adjustment unit (30, 32) or the drain (36) from the adjustment unit (30, 32) to the crank chamber (14) can be controlled.

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Claim 3 (Currently amended): Axial piston drive according to Claim 1, characterized in that in the oil separator (34) and/or in the crank chamber (14) at least part of an oil-level controller (40) is disposed which, when a specified oil level in the oil separator (34) is exceeded and/or when the oil in the crank chamber (14) falls below a certain level, connects the oil separator (34) to the crank chamber (14) by way of a channel (42).

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Claim 4 (Currently amended): Axial piston drive according to Claim 1, characterized in that in the oil separator and an amount of oil that is present are matched to one another in such a way that before an oil deficiency appears in the crank chamber (14), the oil separator overflows and the overflowing oil flows back into the crank chamber (14).

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Claim 5 (Original): Axial piston drive according to Claim 1, characterized in that in the adjustment unit (30, 32) is connected to the crank chamber (14) by way of a drain (36), and a influx (38) from the oil separator (34) to the adjustment unit (30, 32) and the drain (36) from the adjustment unit (30, 32) to the crank chamber (14) can be controlled.

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Claim 6 (Currently amended): Axial piston drive according to ~~one of the preceding claims~~ claim 1, characterized in that the swash plate (16) is supported on a joint head (48, 50) that can be axially displaced by means of a setting piston (44, 46) of the hydraulic adjustment unit (30, 32) and the swash plate (16) is connected by an off-centre joint (52) to a component (54) that is fixed in the axial direction.

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Claim ⁷10 (Original): Axial piston drive according to Claim ⁶9, characterized in that in the setting piston (44) and the joint head (48) are constructed in one piece.

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Claim 11 (Canceled)

Claim 12 (Canceled)

Add new claim 13 as follows:

⁸13. Axial piston drive with a continuously adjustable piston stroke, comprising a drive shaft (10, 12) on which a swash plate (16) is supported in a crank chamber (14) in such a way as to be tiltable and displaceable in the axial direction, and with a controller (18, 20) by means of which an tilt angle and an axial position of the swash plate (16) can be adjusted, and with at least one piston (26, 28) connected to the swash plate (16) so that it can be actuated to move within a cylinder (22, 24), wherein the controller (18, 20) incorporates an adjustment unit (30, 32) that is separated from the piston (26, 28) and hydraulically driven,

characterized in that the adjustment unit (30, 32) is supplied with compressed oil by an oil separator (34) disposed downstream of the cylinder (22, 24) and is connected to the crank chamber (14) by way of a drain (36), and a influx (38) from the oil separator (34) to the adjustment unit (30, 32) or the drain (36) from the adjustment unit (30, 32) to the crank chamber (14) can be controlled.

Add new claim 14 as follows:

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⁷14. Axial piston according to claim ⁸13 characterized in that in the oil separator (34) and/or in the crank chamber (14) at least part of an oil-level controller (40) is disposed which, when a specified oil level in the oil separator (34) is exceeded and/or

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when the oil in the crank chamber (14) falls below a certain level, connects the oil separator (34) to the crank chamber (14) by way of a channel (42).

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(Add new claim 15 as follows:)

¹⁰15. Axial piston according to claim ⁸13 characterized in that in the oil separator and an amount of oil that is present are matched to one another in such a way that before an oil deficiency appears in the crank chamber (14), the oil separator overflows and the overflowing oil flows back into the crank chamber (14).

(Add new claim 16 as follows:)

"¹¹16. Axial piston according to claim ⁸13 characterized in that in the adjustment unit (30, 32) is connected to the crank chamber (14) by way of a drain (36), and a influx (38) from the oil separator (34) to the adjustment unit (30, 32) and the drain (36) from the adjustment unit (30, 32) to the crank chamber (14) can be controlled.
